

Claims

1. A dermatoscope comprising a plurality of light-emitting diodes, which are arranged around optics, for indirect illumination of an examination area, and a plurality of optical waveguides, each of said optical wave guides being arranged in front of one associated light-emitting diode and having a light input surface which faces said associated light-emitting diode, said optical waveguides having an outer wall totally reflecting light emitted from said associated light-emitting diode toward said examination area.
- 15 2. The dermatoscope as claimed in claim 1, wherein a lens is arranged on said light input surface of each of said optical waveguides.
- 20 3. The dermatoscope as claimed in claim 1, wherein a polarization filter is arranged between each of said light-emitting diodes and said optical waveguides.
- 25 4. The dermatoscope as claimed in claim 1, wherein selectively switchable shutters are arranged between said light-emitting diodes and said optical waveguides.
- 30 5. The dermatoscope as claimed in of claim 1, wherein said light-emitting diodes can be switched off selectively.
6. The dermatoscope as claimed in of claim 1, wherein said light-emitting diodes emit light at a differ-

ent wavelength individually or in groups, and can be switched on and off individually or in groups.

7. A dermatoscope comprising a plurality of light-emitting diodes, which are arranged around optics, for indirect illumination of an examination area, and a single conical prism having a basis surface facing said light-emitting diodes, the cone angle of said conical prism being designed such that the light which is injected into said basis surface from said light-emitting diodes is totally reflected on an outer cone surface of said conical prism.
- 15 8. The dermatoscope as claimed in claim 7, wherein lenses is provided on said basis surface, each of said lenses being arranged opposite to an associated light-emitting diode.
- 20 9. The dermatoscope as claimed in claim 8, wherein said lenses are adhesively bonded onto or are integrally formed with said base surface of said conical prism.
- 25 10. The dermatoscope as claimed in claim 7, wherein a polarization filter is arranged between each of said light-emitting diodes and said conical prism.
11. The dermatoscope as claimed in claim 7, wherein 30 selectively switchable shutters are arranged between said light-emitting diodes and said conical prism.

12. The dermatoscope as claimed in of claim 7, wherein said light-emitting diodes can be switched off selectively.
- 5 13. The dermatoscope as claimed in of claim 7, wherein said light-emitting diodes emit light at a different wavelength individually or in groups, and can be switched on and off individually or in groups.
- 10 14. The dermatoscope as claimed in claim 7 , wherein said conical prism has an axial central hole.
- 15 15. The dermatoscope as claimed in claim 14, wherein said central hole comprises a surface having a mat finish.
- 20 16. The dermatoscope as claimed in claim 14, wherein a transparent contact plate covering said examination area, is arranged at an distal end of said central hole.
- 25 17. The dermatoscope as claimed in claim 7, wherein a tubular attachment fitted on said conical prism represents one part of a housing or is used as a holder for said prism on a housing of said dermatoscope for reinforcing.
- 30 18. The dermatoscope as claimed in claim 7, wherein holes into which said light-emitting diodes project are provided in said base surface of said conical prism or in a ring adjacent to said base surface.

19. The dermatoscope as claimed in claim 17, wherein a proximal end of said housing is designed such that a camera or additional optics can be plugged onto said housing via an adapter.

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20. The dermatoscope as claimed in claim 17, wherein said housing is coupled to a camera such that previously adjusted optics cannot be misadjusted even if said housing is rotated with respect to said camera or with respect to additional optics.

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21. The dermatoscope as claimed in claim 19, wherein said adapter comprises a camera ring which can be mounted on optics of said camera, a spacer with a series of spring elements arranged in the form of a ring, and a slide ring which surrounds the spacer, releases said spring elements in an open position and provides an interlocking connection to said dermatoscope housing in a closed position.